

REMARKS

Claims 1-3, 9-10, 12, 15-17, 19, 21, 23, 25-30, 32-39, 41-43 and 46-47 are presented for examination upon entry of the present amendment. Claims 1, 2, 3, 9, 10, 19, 21, 23, 27, 28, 29, 36, and 37 have been amended. Claims 11 and 18 have been cancelled without prejudice by the current amendment. Claims 1 and 19 are independent.

Claim rejections, 35 U.S.C. § 103

The office action rejects claims 1-3, 9, 10, 15-17, 19, 21, 23, 25-27, 29, 32-39, 41 and 46-47 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent Application Publication No. 2004/0083099 by Scarano et al. (hereinafter "Scarano") in view of U.S. Pat. App. Pub. No.2002/0093913 by Brown et al. (hereinafter "Brown"). Applicants are respectfully traversing this rejection.

Present claim 1 requires an audio or video recording device for recording the audio interaction and obtaining an interaction media; a pivot spot defining component for automatically marking an at least one time position in the audio interaction that indicates the occurrence of an at least one pre-defined event or data item; a first audio analysis component; a region of interest defining component for defining an initial region of interest, by determining the time limits of an at least one segment of the audio interaction, the segment containing the time position of a pivot spot, and for activating the first audio analysis component on the initial region of interest for dynamically reducing the time limits of the initial region of interest to obtain the region of interest; and a second audio analysis component for analyzing the region of interest of the audio interaction. The first audio analysis component and the second audio analysis component are selected such that the second audio analysis component requires more computing resources than the first analysis component.

Scarano in view of Brown does not render unpatentable claim 1. For example:

Neither Scarano nor Brown discloses first and second audio analysis components.

Scarano uses a word spotting engine, followed by an SQL query mechanism for retrieving information revealed by the word spotting. Refer, for example, to Scarano at ¶0067: "[t]he present invention integrates a search for spoken words, phrases or sequences of words in an audio segment with a search for traditional SQL data". Brown does not relate to audio analysis generally, and particularly not to audio analysis of two audio interactions.

Neither Scarano nor Brown discloses that the first audio analysis is activated on a part of the interaction that is an initial region of interest of an interaction

In Scarano, the audio analysis is performed over the full interaction, and not only on a region of interest as required by present claim 1. See for example Scarano at ¶0098:

"[t]he search set identifies a set of voice communications (e.g., telephone calls) within the speech repository 201. For each voice communication in the set identified by the meta-SQL search, a speech search is executed by the search engine 205 for each of the search expressions that were given in the original search criteria".

Brown also does not disclose processing only part of the data, such as transferring only part of the data. Brown suggests at ¶0042 to perform only part of the activity, but not on part of the input:

"... to reduce the load on host processor 201 in high load conditions or to eliminate wasteful operations, such as decompressing a compressed file that need not be compressed to begin with. To reduce the processor load in high load conditions, the data transfer-related operations can be sub-divided into component operations and

then only select component operations are performed." (Emphasis supplied).

Neither Scarano nor Brown discloses that the second audio analysis is activated on a part of the interaction that is a region of interest of an interaction

As discussed in the preceding paragraph, in Scarano, the audio analysis is performed over the full interaction, and not only on the region of interest as required by claim 1. In particular, Scarano does not disclose a second audio analysis, so Scarano cannot suggest performing a second audio analysis on a part of the interaction. The second analysis of Scarano, being querying, is performed over all data collected on the first phase.

Brown also does not disclose processing, such as transferring only part of the data.

Neither Scarano nor Brown discloses activating the first audio analysis component for dynamically reducing the initial region of interest to obtain the region of interest.

Scarano uses the audio analysis to obtain words spoken in the interaction, and not to define a region of interest. Brown does not disclose audio analysis, nor does Brown disclose operating on part of an interaction. Thus, it follows that Brown does not disclose operating an engine to reduce an initial region of interest of the interaction.

Brown does not teach that the second audio analysis requires fewer resources than the first audio analysis.

Brown has no control over the type of analysis to be performed on any input, since the required processing and the input is known in advance. Some operations handled by Brown are transfer operations, while others are processing of known kinds. Brown attempts to make precedence and thus use the available resources efficiently, but cannot decide which processing to use and on what part of the input, and particularly not that later operated processing requires more resources than earlier ones.

Even assuming, *arguendo*, that the combination of Scarano in view of Brown discloses claim 1 (a position Applicants do not take), still a person skilled in the art would not consider the combination of Scarano, which deals with call center interaction analysis, with Brown, which deals with workload distribution among processors.

In view of the above, the cited combination of Scarano and Brown neither teaches nor suggests claim 1, particularly elements of first and second audio analysis components; activating the first analysis component for dynamically reducing the time limits of the initial region of interest to obtain the region of interest; a second audio analysis component for analyzing the region of interest of the audio interaction; or that a second analysis component requires more computing resources than the first analysis component. Reconsideration and withdrawal of the §103 rejection of claim 1 is respectfully requested.

Claims 2-3, 9, 10, 15-17, 34, 36, 38, and 46 depend from claim 1 and, for at least the reason of such dependence, are also patentable over the cited combination of Scarano and Brown.

The same arguments as for claim 1 are also applicable towards claim 19. Scarano in view of Brown does not teach or suggest: a first audio analysis and a second audio analysis; the first audio analysis being activated on a part of the interaction; the second audio analysis being activated on a part of the interaction; activating the first audio analysis component for dynamically reducing the initial region of interest; and that the second audio analysis requires fewer resources than the first audio analysis. Further, one skilled in the art would not be motivated to make the cited combination of Scarano and Brown, which are from widely disparate fields. Reconsideration and withdrawal of the 103 rejection of claim 19 is respectfully requested.

Claims 21, 23, 25-27, 29, 32-39, 41, and 47 depend from claim 19 and are also allowable for the reasons set forth above with respect to claims 1 and 19 addressed above.

The Office Action rejects claims 11, 18 and 30 under §103 as being unpatentable over Scarano in view of Brown and further in view of U.S. Pat. 6,937,706 to Bscheider et al. ("Bscheider"). Claims 11 and 18 have been canceled, thus rendering their rejection moot. As to claim 30, Applicants traverse.

In forming the §103 rejection, the Office Action acknowledges that Scarano in view of Brown fails to teach the usage of computer telephony integration and screen events, and introduces Bscheider for this proposition. Assuming *arguendo* that Bscheider so teaches, nevertheless Bscheider does not operate to overcome the several inabilities of Scarano in view of Brown to disclose claim 19, from which claim 30 depends. Thus claim 30 depends from a claim that is allowable, and is, at least by virtue of such dependence, also patentable over the cited art. Dependent claim 30 also contains additional features absent from the prior art of record. For example, claim 30 requires identifying a pre-defined screen event in the interaction data. Screen events relate to events occurring on the screen of the agent, see for example ¶0019 of the present application:

"[s]creen events are based entirely on what takes place on an agent's display screen. Screen events may be used as triggers to other actions whenever an event of choice takes place. Interactions are tagged with the event, enabling ready search, retrieval and evaluation of the calls. One non-limiting example of a screen event analysis involves the capturing of a field displayed on the agent's screen that indicates the change of status of a user account. For example, when the account status changes from 'Active' to 'Inactive' an event is generated and recorded to a database."

Bscheider, however, relates to screen image data and not to screen events as information additional to the data being processed or as indicators to identifying time locations within the sequence.

Applicants are respectfully requesting that the section 103 rejection of claim 30 be reconsidered and withdrawn.

The Office Action rejects claims 12 and 28 under §103 as being unpatentable over Scarano in view of Brown and further in view of U.S. Pat. App. Pub. 2002/0194002 to Petrushin ("Petrushin"). Applicants respectfully traverse.

In forming the § 103 rejection, the Office Action acknowledges that Scarano in view of Brown fails to teach an emotion analysis component, and introduces Petrushin for the proposition that Petrushin teaches an emotion analysis component. Assuming, *arguendo*, that Petrushin so teaches, nevertheless Petrushin does not operate to overcome the several inabilities of Scarano to disclose independent claims 9 and 19 from which claims 12 and 28 depend, respectively. Thus claims 12 and 28 depend from claims that are allowable, and are, at least by virtue of such dependence, also patentable over the cited art. Applicants are respectfully requesting that the section 103 rejection of claims 12 and 28 be reconsidered and withdrawn.

The Office Action rejects claim 42 under §103 as being unpatentable over Scarano in view of Brown, and further in view of U.S. Pat. 6,724,887 B1 to Eilbacher ("Eilbacher"). Applicants respectfully traverse.

In forming the §103 rejection, the Office Action acknowledges that Scarano in view of Brown fails to teach that the method is used for verifying that an agent requested a customer's permission to put the customer on hold, the pivot spot is the time the agent put the customer on hold, the initial region of interest is the whole interaction, and the region of interest is defined by a first predetermined number of seconds prior to the pivot spot and a second predetermined number of seconds following the hold, and introduces Eilbacher for the proposition that Eilbacher so teaches. Assuming, *arguendo*, that Eilbacher indeed so teaches, nevertheless Eilbacher does not operate to overcome the several inabilities of

Scarano in view of Brown to disclose the independent claims. Thus claim 42 depends from a claim that is allowable, and is, at least by virtue of such dependence, also patentable over the cited art.

In addition, Eilbacher does not disclose or suggest identifying a particular time location within the interaction. On the contrary, Eilbacher teaches analyzing interactions as a whole, see for example Eilbacher at col. 10 line 17: "*these types of recordings allow for evaluating of the full customer experience during the interaction.*" (Emphasis supplied). Eilbacher is recording and evaluating full interactions only, cradle-to-grave, and does not teach or suggest setting a pivot spot, which would be meaningless in such a recording scheme.

Applicants are respectfully requesting that the section 103 rejection of claim 42 be reconsidered and withdrawn, and that claim 42 be passed to allowance.

The Office Action rejects claim 43 under §103 as being unpatentable over Scarano in view of Brown and in further view of Eilbacher and U.S. Pat. 5, 918,213 to Bernard et al. ("Bernard"). Applicants respectfully traverse.

In forming the § 103 rejection, the Office Action acknowledges that Scarano in view of Brown fails to teach that the method is used for measuring the effectiveness of a promotion offer to a customer requesting the termination of the service, the pivot spot is the time of a screen event related to offering a promotion or to an account being saved or lost, and the region of interest is defined by a first predetermined number of seconds prior to the pivot spot, and introduces Eilbacher and Bernard for the proposition that Eilbacher and Bernard so teach. Assuming *arguendo* that Eilbacher and Bernard indeed so teach, nevertheless Eilbacher and Bernard, either separately or in combination do not operate to overcome the several inabilities of Scarano in view of Brown to disclose independent claim 19. Thus, claim 43, which depends from independent claim 19 that is allowable, is also

patentable over the cited art. Applicants are respectfully requesting that the section 103 rejection of claim 43 be reconsidered and withdrawn.

Applicants believe that the application is now in order for allowance. Accordingly a notice of allowance for all the claims is respectfully requested.

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Respectfully submitted



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